



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION LINE

SR-6J

September 6, 1996

EPA Region 5 Records Ctr.



207081

Mr. Alan P. Bielawski, Esq.  
Sidley & Austin  
One First National Plaza  
Chicago, Illinois 60603

**Re: Follow-up Letter on RCRA and TSCA Issues  
Lenz Oil Service Site  
Lemont, Illinois**

Dear Mr. Bielawski:

Based on the discussion in our meeting on September 3, 1996, and on previous discussions, this letter provides responses to the questions raised in your letter of August 7, 1996 and to several additional questions, regarding the applicability of RCRA and TSCA regulations to the remedial options being considered at the Lenz Oil Superfund site in Lemont, Illinois. Questions are stated below, and responses follow in italic font. Language in brackets has been inserted in some questions to help clarify them.

The responses in this letter supersede those in the letters dated August 22, 1996 and August 30, 1996.

Questions Presented by Lenz Oil Respondents in Letter Dated August 7, 1996

1. LNAPL-contaminated media: According to U.S. EPA guidance documents, the various Regions have discretion to determine, on a site-specific basis, the level of contamination which may remain in media containing a RCRA listed waste, below which the media will be deemed nonhazardous. In your August 5, 1996 letter, you appear to take the position that LNAPL-contaminated media will not be considered [RCRA] hazardous if the residual level of risk falls below the 10E-04 to 10E-06 target carcinogenic risk range and the 1.0 Hazard Index for noncarcinogenic risks. Are we correct in assuming that these risk assessments may be made after contaminated soils or groundwater are treated to address the listed LNAPL waste?

*Yes, for the purposes of Superfund sites, if soil or groundwater containing a RCRA listed waste is treated to cleanup objectives that result in a residual level of risk that falls below the 10E-04 to 10E-06 target carcinogenic risk range and the 1.0 Hazard Index for noncarcinogenic risks, the soil or groundwater is no longer considered to be RCRA hazardous (provided it is not RCRA characteristic). However, if the total cumulative residual level of risk due to the presence of RCRA hazardous waste is greater than 10E-06, RCRA closure/post-closure requirements may be relevant and appropriate.<sup>1</sup>*

*In the case of the Lenz Oil site, where the LNAPL is a listed waste and also has been shown to be RCRA characteristic due to ignitability and toxicity, in order for soil or groundwater to no longer be considered to be RCRA hazardous after treatment, it would also have to pass the RCRA ignitability test and the RCRA TCLP test.*

2. Is LNAPL-contaminated soil which is treated to a target risk level below 10E-04, but above 10E-06, considered to be a RCRA-listed waste?

*See response #1.*

3. PCB-contaminated soil: If the contamination is primarily due to the presence of PCBs, must such soils be remediated (by treatment or capping) if their PCB concentrations fall beneath TSCA cleanup levels?

*If PCB levels in soil are below the TSCA regulatory level of 50 ppm, TSCA regulations will not have to be applied. If soils contain PCBs below 50 ppm but the soil still exceeds the acceptable risk range specified by the Agencies, the soils will need to be addressed.*

*Based on soil sampling to date at the Lenz Oil site, PCBs in soil do not equal or exceed 50 ppm, so TSCA regulations should not be applicable.*

4. Must excavated soils which exceed the 10E-04 to 10E-06 target risk range due to contaminants other than PCBs [specifically, RCRA hazardous waste] be treated as [RCRA] hazardous wastes?

*See response #1.*

5. PCB-contaminated groundwater: Filtration and other treatment methods may reduce the target risk posed by the groundwater to a level below 10E-04, but above 10E-06. Will such treated groundwater be considered a RCRA-listed waste?

*Groundwater contaminated with LNAPL from listed waste will be considered to be a*

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<sup>1</sup> The assumption is that the 10E-06 risk level will be based on a residential scenario.

*RCRA waste if the risk posed by the groundwater exceeds the acceptable risk level set by the Agencies or if the groundwater fails a characteristic test. Groundwater that is treated will presumably be disposed of either via discharge to a surface water body under an NPDES permit equivalence or disposed of at a POTW. In each case, disposal of the groundwater will be subject to the requirements either under the NPDES permit or as set by the POTW. If groundwater transported to a POTW by truck contains RCRA hazardous waste that poses a risk greater than  $10E-06$ , or if it exhibits a RCRA characteristic, all sludge generated by the POTW in the process of treating the groundwater would be considered a RCRA hazardous waste. If the treated groundwater is disposed of at a POTW by discharging it to the sewer system, RCRA regulations will not apply and sludge generated by the POTW will not be considered RCRA hazardous waste.*

6. Soil cap: Is a cap (either impermeable or permeable) necessary to cover soils which pose a target risk above  $10E-06$  but below  $10E-04$ ?

*If the acceptable risk level set by the Agencies is  $10E-06$  and capping is the remedial component to address the soil, all soil posing a risk greater than  $10E-06$  and/or failing a RCRA characteristic test would have to be located under the cap. If the acceptable risk level set by the Agencies is  $10E-04$ , it is assumed that capping would not be considered as an option for addressing these limited soil areas. If RCRA listed waste in the soil is responsible for the unacceptable risk, or if the soil exhibits one or more RCRA characteristics, a RCRA-compliant cap would be called for unless a RCRA waiver were obtained. Also, if RCRA listed or characteristic waste is left in place at the site, RCRA closure post-closure requirements will be applicable.*

7. Soil risk levels: ERM would like to include a statement in the FS report that, based on an application of TACO procedures, soils located in the proximity of sample SB01 (0 - 5 ft), SB07 (5 - 9 ft), and SB15R (4.5 - 9.5 ft) do not pose a risk to human health and the environment and therefore do not need to be remediated. As you know, PRC calculated a carcinogenic target risk above  $10E-04$  for these soils based on an overly conservative estimate of inhalation of VOCs from excavated soils. It is our understanding that the Agency would not object to such a statement since the risk calculation under TACO procedures is at least two orders of magnitude lower than the risk calculated by PRC.

*In order to be consistent, risk calculations in the Baseline Risk Assessment and Feasibility Study report for the Lenz Oil site will be used as the basis for cleanup actions at the site.*

8. Definition of "Site": The definition of the boundaries of the "Site" may impact various RCRA requirements associated with intra-site movement of LNAPL-contaminated soil, purge and well development groundwater. Besides the Lenz Oil property itself, for purposes of RCRA, is the property residing above the LNAPL plume (which includes the adjacent property and Jeans Road) considered to be "on-site"?

*For the purposes of Superfund, we will consider the site to mean those areas where contamination originating from the site has come to be located. This would mean that the adjacent property and the portion of Jeans Road overlying the contamination may be considered to be part of the site.*

#### Additional Questions

9. Soils posing a risk greater than 10E-04: Would incineration of these soils in an off-site incinerator require meeting any RCRA regulations? If soils were treated on-site using thermal desorption, could the residuals be placed back on site, under the CAMU policy, without triggering the LDR/Land Ban/MTR rules? If residuals from the treatment process were shipped off-site for disposal, could they be disposed of in a Subtitle D landfill, or would it have to be a Subtitle C landfill?

*If the risk posed by soil were due to RCRA hazardous waste (listed or characteristic), incineration of these soils off-site would have to meet RCRA regulations. However, because the soils do contain PCBs, it is possible that RCRA incinerators may not be willing to accept them, in which case an incinerator permitted for TSCA and RCRA waste would have to be used.*

*If soils were treated on-site, and post-treatment sampling showed that no unacceptable risk remained and the soil was not RCRA characteristic, soil could be placed back into the excavation without triggering either LDR rules or requiring documentation of a CAMU. If soil remaining on site posed a total cumulative residual risk greater than 10E-06 due to the RCRA hazardous waste it contained, RCRA closure/post-closure requirements may be relevant and appropriate.*

*If the level of RCRA waste in the soil after treatment still poses an unacceptable risk, or if the treated soil fails any RCRA characteristic tests, the first alternative will be to retreat the soil. If retreatment did not work, soils could be disposed of in a Subtitle C landfill as long as LDRs were met. Also, any contaminated carbon or other media generated to treat off-gas, for example, from the thermal desorption unit would have to be treated as a RCRA hazardous waste, and would either have to be incinerated at a RCRA-compliant incinerator or disposed of in a Subtitle C landfill, according to LDRs. In no cases would treated soils have to be shipped to a Subtitle D landfill.*

10. Soils contaminated with LNAPL: Would incineration of these soils in an off-site incinerator require meeting any RCRA regulations? If soils were treated on-site using thermal desorption, could the residuals be placed back on site under the CAMU policy, without triggering the LDR/Land Ban/MTR rules? If residuals from the treatment process were shipped off-site for disposal, could they be disposed of in a Subtitle D landfill, or would it have to be a Subtitle C landfill?

*Soil would have to be disposed of according to TSCA regulations if sample analysis*

*showed that it contained PCBS at or above 50 ppm. If these soils were treated on-site so that the soils no longer posed an unacceptable risk and exhibited no RCRA characteristics, the treated soils could be placed on-site without triggering LDRs or requiring that the "disposal unit" qualify as a CAMU. If soil remaining on site posed a total cumulative residual risk greater than 10E-06 due to RCRA hazardous waste in it, RCRA closure/post-closure requirements may be relevant and appropriate. If, after soils were treated, unacceptable risk was still present due to the RCRA hazardous waste present, or if treated soils were RCRA characteristic, the soils would be retreated. If retreatment failed, the soil would have to be disposed of in a Subtitle C landfill or in a TSCA chemical waste landfill if the soil contained 2 ppm PCBs or greater after treatment. Also, any contaminated carbon or other media generated to treat off-gas, for example, from the thermal desorption unit would have to be treated as a RCRA hazardous waste, and would have to either be incinerated properly, or disposed of in a Subtitle C landfill in accordance with LDRs.*

11. Is it correct that in situ treatment of soils using solidification/stabilization (S/S) would not trigger LDRs/MTRs? Would a certain treatment standard have to be attained if the soils were considered to be listed wastes?

*If soils are treated in situ using S/S, RCRA regulations related to closure post-closure requirements will need to be considered. In addition, performance standards required by the Agencies would have to be met.*

12. Under what circumstances would a provision in the property title or a deed restriction on the property have to be established regarding leaving RCRA-listed waste on site? If residual LNAPL was going to remain on site, what type of deed restriction would this entail? What would the limitations on future property use be?

*If residual LNAPL is a RCRA listed waste posing greater than 10E-06 risk, or if a RCRA characteristic waste remained on site, a deed restriction, as described in RCRA closure post-closure requirements, would have to be placed on the property describing the nature and location of the LNAPL. If a future owner of the property wanted to take any action that would disturb the LNAPL, all RCRA requirements would have to be met. For specific requirements on RCRA closure/post-closure deed restriction requirements, CFR Sections 264.116 and 264.119 should be consulted.*

13. CAMU Policy: Is this policy still valid? Does a permit application have to be filed with RCRA in order to use this concept at a site? What are the groundwater monitoring requirements for a CAMU?

*Revisions to the CAMU policy are currently being considered by the Agency. However, if an action based on the current CAMU policy has been approved, i.e., if a ROD has been signed, before the new bill is passed, the new statute would not affect the decision. If the CAMU concept is used as part of the selected remedy, explanation of how an on-*

*site CAMU would meet the RCRA requirements would be included in the ROD. Groundwater monitoring requirements related to CAMUs are described in 40 CFR 264 Subpart G.*

14. What is the Federal Register citation for the CAMU policy?

*The Federal Register citation is February 16, 1993, p. 8658. The statute was encoded under 40 CFR Subpart S, Section 264. The section that discusses CAMUs is Section 264.552.*

15. Would soil at the Lenz Oil site be subject to TSCA regulations?

*Based on soil sampling results to date, the soils at the Lenz Oil site are not regulated under TSCA because levels of PCBs in the soil are less than 50 ppm.*

*If future soil sampling at the site showed PCBs present at a level of 50 ppm or greater, TSCA regulations would apply. Soil visibly contaminated with LNAPL will have to be tested to determine levels of PCBs present. If sampling showed soils containing PCBs at or above 50 ppm and it was determined that the area was residential, all soil containing PCBs greater than or equal to 10 ppm would have to be removed, properly disposed of, and replaced with soil containing less than 1 ppm PCBs. At a minimum, soil would have to be excavated to a depth of 10 inches. If it was determined that the area was industrial, all soil containing PCBs greater than or equal to 25 ppm would have to be removed and properly disposed of.*

*If soil containing greater than or equal to 50 ppm PCBs is treated on-site via thermal desorption, the design for the thermal desorption system would be reviewed by the Region 5 TSCA Program unless it was a TSCA-permitted unit. The LNAPL separated from the soil during the process would have to be incinerated at a TSCA-regulated incinerator, or, if an afterburner was included in the system, the afterburner would have to meet the same destruction and removal efficiency (DRE) requirements specified for a TSCA-permitted incinerator. The residual soil must have a PCB concentration less than 2 ppm. If PCBs are present in the treated soil at concentrations at or above 2 ppm, the soil must be retreated until this level is achieved, or disposed of in a TSCA-permitted chemical waste landfill or incinerator. Also, a demonstration test is required to ensure that the unit can achieve the TSCA-required PCB concentration of less than 2 ppm PCBs in the residual soil. If a stricter State or Federal standard exists for the level of PCBs allowable in the residual soil, this standard may have to be followed.*

16. How will TSCA regulations affect the treatment and/or disposal of the LNAPL at the site?

*Because the LNAPL at the site contains up to 248 ppm PCBs, it is regulated under TSCA. TSCA regulations require that liquids containing PCBs at concentrations between 50 and 500 ppm be incinerated at a TSCA-regulated incinerator or disposed of in a TSCA-*

*regulated high efficiency boiler. Although TSCA regulations allow for disposal in a chemical waste landfill, this type of disposal would not be permitted in this case due to the characteristic of ignitability exhibited by the LNAPL. If an alternate treatment method such as thermal desorption is selected for treating the LNAPL, the system must be designed to meet the same DRE requirements as specified for incineration of PCBs. If alternative treatment takes place on site, a TSCA permit is not required; however, the Region 5 TSCA Program would review the proposed design to ensure that it meets the substantive requirements of TSCA. Any residuals generated by the process would have to contain less than 2 ppm PCBs; otherwise they would have to be disposed of in a TSCA-permitted chemical waste landfill or incinerator.*

*If alternative treatment takes place off-site, the treatment process used would have to be one that is TSCA-approved. As of this date, USEPA Region 5 has not issued any permits for alternative destruction processes, although several demonstration permits have been issued by USEPA Headquarters.*

17. What TSCA regulations apply if TSCA-regulated waste is left on site?

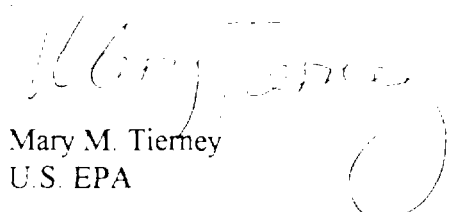
*If TSCA waste is left on site, the Federal TSCA Program would review the information to verify that all reasonable actions had been taken to attempt to remove the LNAPL from the site and would make recommendations about the need for any follow-up activities such as, at a minimum, deed restrictions, ground water monitoring, and/or five-year reviews.*

18. What are the CFR citations for TSCA requirements?

*TSCA regulations can be found in 40 CFR Part 761. Disposal requirements, requirements for incinerators, and requirements for chemical waste landfills are found in §§761.60, 761.70, and 761.75, respectively.*

Please call me at (312) 886-4785 if you have any questions.

Sincerely,

  
Mary M. Tierney  
U.S. EPA

cc Elsie Millano, ERM-North Central, Inc. (also via facsimile)  
John Imse, ERM-North Central, Inc.  
Diane Richardson, Commonwealth Edison  
John Griggs, Commonwealth Edison (also via facsimile)  
Jerry Willman, IEPA  
Rob Watson, IEPA  
Dick McAvoy, BVSPC  
Stuart Hersh, USEPA  
Judy Kleiman, USEPA